

CLAIMS

1. A wiring installation device for installing wiring in a facility to facilitate subsequent identification of the location of the wiring for attachment of the wiring to a system to provide a service thereto, the facility comprising a frame and a wall attached to the frame, the frame comprising a pair of frame members, the wall comprising a wall front side, a wall rear side, and a wall hole extending between the wall front side and the wall rear side, the wiring installation device comprising
- a cover support unit configured to extend behind the wall rear side, the cover support unit comprising a mount that is configured to be attached to the pair of frame members and comprises a mount hole that extends through the mount and is configured to be aligned with the wall hole,
- a wiring retainer, and
- a cover, the wiring retainer being attached to or configured to be attached to at least one of the cover support unit and the cover to retain the wiring adjacent the wall hole, the cover being configured for movement relative to the cover support unit between an uncovered position in which the cover uncovers the wall hole and a covered position in which the cover covers the wall hole adjacent the wall front side, extends through the wall hole and the mount hole, and is attached to the cover support unit at a location rearward of the mount.
2. The wiring installation device of claim 1, wherein the cover support unit comprises a cover support sleeve attached to and extending rearwardly from the mount, the cover comprises a cap configured to cover the wall hole and a coupler sleeve attached to the cap and configured to extend through the wall hole and the mount hole, and one of the cover support sleeve and the coupler sleeve comprises a thread for engagement with the other of the cover support sleeve and the coupler sleeve to attach the cover to the cover support unit.

3. The wiring installation device of claim 2, wherein an inner surface of the cover support sleeve comprises at least two bumps, and an outer surface of the coupler sleeve comprises the thread which engages the bumps when the cover is positioned in the covered position.

5 4. The wiring installation device of claim 2, wherein the wiring retainer comprises a retainer wall that is attached to the cover support sleeve and comprises a retainer hole for retention of wiring extending therethrough into the cover support sleeve.

10 5. The wiring installation device of claim 1, wherein the cover support unit comprises a cover support plate that is attached to a rear side of the mount and extends across and rearward of the mount hole, the wiring retainer comprises a retainer hole formed in the cover support plate for retention of wiring extending through the retainer hole, the cover support plate comprises a coupler hole, and the cover comprises a cap configured to cover the wall hole and a coupler
15 attached to the cap and configured to extend through the wall hole and the mount hole into the coupler hole for engagement therewith to attach the cover to the cover support unit.

6. The wiring installation device of claim 5, wherein the coupler hole comprises a thread, and the coupler comprises a post that is attached to the cap
20 and comprises a thread that engages the thread of the coupler hole when the cover is positioned in the covered position.

7. The wiring installation device of claim 6, wherein the post and the cap cooperate to form a monolithic unit.

8. The wiring installation device of claim 5, wherein the cover
25 support plate comprises a plurality of coupler holes, the cap comprises a cap hole, and the coupler comprises a screw configured to extend through the cap hole, the wall

hole, and the mount hole into one of the coupler holes for threaded engagement therewith.

9. The wiring installation device of claim 5, wherein the coupler comprises a plurality of fingers and a finger mover, the fingers are attached to the cap and configured to extend through the coupler hole, and the finger mover is configured to move the fingers away from one another into engagement with the cover support plate when the fingers extend through the coupler hole.

10. The wiring installation device of claim 9, wherein each finger comprises a lug, the cap comprises a cap hole, and the finger mover is configured to extend through the cap hole into a space between the fingers to move the fingers away from one another for engagement between the lugs of the fingers and the cover support plate.

11. The wiring installation device of claim 5, wherein the cover support plate comprises spaced apart side walls and an connector wall, the side walls are attached to and extend rearwardly away from the mount rear side, the connector wall is attached to the side walls and extends across the mount hole in spaced apart relation to the mount, and the connector wall comprises the coupler hole.

12. The wiring installation device of claim 11, wherein the connector wall comprises the retainer hole, and each of the side walls comprises another retainer hole for retention of wiring extending therethrough.

13. The wiring installation device of claim 1, wherein the cover support unit comprises a rotation blocker attached to a rear side of the mount, the wiring retainer comprises a retainer hole formed in the rotation blocker for retention of wiring extending through the retainer hole, the cover comprises a cap, a screw configured to extend through a cap hole formed in the cap, a nut for threaded engagement with the screw, a pair of relatively movable flanges attached to the nut, and a spring configured to move the flanges from a collapsed position in which the

flanges are allowed to move through the wall hole and the mount hole to an extended position in which at least one of the flanges is configured to engage the rotation blocker so that rotation of the flanges is blocked by the rotation blocker to allow relative movement between the nut and the screw extending therethrough for threaded engagement therewith to cause engagement between the flanges and a rear side of the mount.

14. The wiring installation device of claim 13, wherein the rotation blocker comprises spaced-apart first and second rotation blocker walls attached to the mount rear side for engagement with the flanges, and the retainer hole is formed in one of the rotation blocker walls.

15. The wiring installation device of claim 1, wherein the cover support unit comprises a cover support attached to and extending rearwardly from a rear side of the mount, and the cover is configured for attachment to the cover support.

16. The wiring installation device of claim 15, wherein the cover support and the cover are configured for threaded engagement therebetween.

17. The wiring installation device of claim 1, wherein the cover comprises a coupler that is configured to attach cover to cover support unit and comprises a thread.

18. The wiring installation device of claim 1, wherein the mount is a generally flat, elongated plate comprising first and second attachment portions configured for attachment to the frame members and an intermediate portion that extends between the first and second attachment portions and comprises the mount hole and first and second tool holes between which the mount hole is positioned, and each of the first and second tool holes is configured to receive a cutting tool when the cutting tool is used to cut the intermediate portion away from the attachment portions.

19. The wiring installation device of claim 18, comprising a pair of fasteners, wherein each of the first and second attachment portions comprises a fastener hole to receive one of the fasteners therethrough into one of the frame members, and the first and second tool holes are larger than the fastener holes.

5 20. The wiring installation device of claim 1, wherein the mount comprises first and second attachment portions configured for attachment to the frame members, an intermediate portion extending between the first and second attachment portions and comprising the mount hole, and a frangible portion positioned between each attachment portion and the intermediate portion for detachment of pieces of the
10 intermediate portion from the first and second attachment portions.

21. The wiring installation device of claim 20, wherein each frangible portion is a reduced thickness groove-recessed from a front side of the mount toward a rear side of the mount.

22. The wiring installation device of claim 1, wherein the cover
15 support unit comprises a sleeve attached to a front side of the mount and configured to extend in the wall hole, and the cover extends through the sleeve when the cover is positioned in the covered position.

23. The wiring installation device of claim 1, wherein the wiring retainer is attached to the cover support unit at a location rearward of the mount.

20 24. A wiring installation device for installing wiring in a facility to facilitate subsequent identification of the location of the wiring for attachment of the wiring to a system to provide a service thereto, the facility comprising a frame and a wall attached to the frame, the frame comprising a pair of frame members, the wall comprising a wall front side, a wall rear side, and a wall hole extending between the
25 wall front side and the wall rear side, the wiring installation device comprising

a mount that is configured to extend behind the wall rear side and comprises a mount front side, a mount rear side, and a mount hole extending between the mount front side and the mount rear side,

5 a first sleeve attached to the mount front side and configured to extend into the wall hole,

a cover support sleeve attached to the mount rear side,

a wiring retainer wall that is attached to the cover support sleeve and comprises a retainer hole for retention of wiring extending therethrough into the cover support sleeve, and

10 a cover comprising a cap and a coupler sleeve attached to the cap, the cover being configured for movement between an uncovered position in which the cap uncovers the wall hole and a covered position in which the cap covers the wall hole adjacent the wall front side, the coupler sleeve extends through the first sleeve positioned in the wall hole and through the mount hole into the cover support sleeve,
15 and a thread of one of the coupler sleeve and the cover support sleeve engages the other of the coupler sleeve and the cover support sleeve.

25. The wiring installation device of claim 24, wherein an inner surface of the cover support sleeve comprises at least two bumps, and an outer surface of the coupler sleeve comprises the thread which engages the bumps when the cover
20 is positioned in the covered position.

26. A method of installing a system in a facility comprising a wall, a pair of frame members positioned behind the wall, wiring, and a wiring installation device attached to the frame members and extending behind the wall to retain the wiring adjacent a wall hole formed in the wall, the method comprising the acts of
25 cutting out a first portion of the wall and of the wiring installation device around the wall hole and removing the cut-out first portion from a system installation area,

breaking the wiring installation device along a frangible portion after removal of the cut-out first portion and removing the broken portion of the wiring installation device from the system installation area, and

5 cutting out a second portion of the wall after removal of the broken portion and removing the cut-out second portion of the wall from the system installation area for installation of the system in the system installation area and attachment of the wiring to the system to provide a service thereto.

27. The method of claim 26, wherein the frangible portion comprises a groove, and the breaking act comprises breaking the wiring installation
10 device along the groove.

28. The method of claim 26, wherein the wiring installation device comprises a tool hole, and the act of cutting out the first portion comprises moving a cutting tool through the tool hole.

29. The method of claim 26, wherein the wiring installation device
15 comprises a cover support unit and a cover, the cover support unit comprises a mount that is attached to the frame members and comprises a mount hole, the cover is configured for movement relative to the mount between an uncovered position in which the cover uncovers the wall hole and a covered position in which the cover covers the wall hole adjacent a front side of the wall, extends through the wall hole
20 and the mount hole, and is attached to the cover support unit at a location rearward of the mount, the mount comprises a tool hole and the frangible portion which is configured as a groove, the act of cutting out the first portion comprises moving a cutting tool through the tool hole, and the breaking act comprises breaking the mount along the groove.

25 30. The method of claim 26, comprising installing the system in the system installation area and attaching the wiring to the system to provide a service thereto.